

EPIPHANY, INC. **SOFTWARE RELEASE 3.2: CLARITY UPDATE** **NEW PRODUCT: RELEVANCE** **RELEASE NOTES**

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Introduction

Welcome to Clarity 3.2 and Relevance! This document will summarize the features of Epiphany Software's newest Enterprise Relationship Management software applications. Included are feature enhancements to Epiphany's Clarity 3.1, known items to look out for, and where to go for further information.

Note on migrating from Clarity 3.1 to Clarity and Relevance 3.2: There is a high level of added functionality, tools, and a much-improved streamlined structure of Epiphany's database schema. The migration process is therefore best served by providing personalized service to migrating customers via Epiphany's Professional Services Department. This process is not articulated in this document; migration will instead be realized through hands-on implementation by Epiphany's services in conjunction with the customer's IS / IT department.

Section I: Feature Enhancements

This section summarizes the new features provided in Release 3.2.

New Features for IS teams

❑ ***NEW ADAPTIVE SCHEMA GENERATOR***

Release 3.2 employs a more powerful, integrated metadata architecture with the EpiCenter Enterprise Manager, a new and user-friendly GUI (EpiMgr.exe). EpiMgr consolidates and integrates all the variables and parameters that drive the Epiphany system, facilitating the job of the administrator to create, modify, and control the company's metadata.

The Enterprise Manager provides for many newly added functions:

The ability to import and export part or all of your metadata,

Well organized, pop-up forms facilitating metadata creation and configuration, and

Clear displays of vital information regarding dimensions, facts, aggregates, extraction settings, security settings, and even ticksheets.

❑ ***EPICHANNEL EXTRACTORS, SEPARATE METADATA AND DATAMART DATABASES***

The 3.2 EpiChannel extractors are defined by the same GUI as is the star schema, which integrates SQL and non-SQL steps into a multi-stage workflow. Extraction statements have a more flexible mapping to the destination table and can use adaptive SQL either for database vendor independence or for adaptive extractions. Separate databases for metadata and aggregate data provides for easier maintenance, less intrusion or damage from mishaps, and easier error recovery.

Extraction set identification is more flexible and controllable. Trial runs and limited return set runs are supported. All runs are monitorable via the NT performance monitor, featured below.

❑ ***CONFIGURABLE, INFORMATIVE EXTRACTION LOGS***

Release 3.2 provides substantially increased and clearer log output from extractions and aggregate builds. Additionally, error handling is much more robust and features optional verbosity levels. These numerous, user-settable verbosity or "debug" levels control the amount of output the user would like to see from the back-end operation. These debug settings also provide for breakpoints, which may be established between or even within SQL statements. Extraction and aggregate build output is printed out in real-time as well as placed in separate logs with distinct and valuable information.

❑ ***NEW SECURITY SYSTEM***

This new feature provides ticksheet access control at multiple levels, from entire ticksheets to line item attributes and resulting facts. User access can be limited to any set of values on any field. Moreover, the Epiphany user and password management can be completely integrated into the NT security system, avoiding the need to maintain duplicate lists of users and groups.

❑ ***SPEED***

Hotswaps, used as safeguards in error recovery for extractions, are now instantaneous due to a resourceful design change in its method.

Query reports can complete from two to many times faster, depending on the query and the environment. Certain corner case queries that ran for a prohibitively long duration in Release 3.1 can now be realized in moments.

❑ ***OPTIONAL PERFORMANCE MONITOR***

Through a standard NT monitoring tool, real-time graphical observation on the progress of an extraction can be easily observed. This tool assures the observer that the extraction is in fact progressing; moreover, it indicates what step the extraction is currently processing.

New Features for Users

❑ ***NEW PRODUCT! RELEVANCE***

This new analytical tool set lets you identify trends, forecast quarter projections, discover what is doing well and what is not, find clusters of buying behavior, spot patterns in spending, and capture a graphical bird's-eye view of your whole business.

❑ ***STREAMLINED BROWSER USER INTERFACE***

The user interface has been streamlined to better handle many filters and options. These are now set in pop-up windows, thus simplifying the main page and making it easier for the user to see all the aspects of ticksheet selections simultaneously. The consolidation of filter settings and newly expanded display options on one summary screen will be appreciated by both new users and experienced creators of complex reports.

❑ ***TICKSHEET BUILDER ADDITIONS***

New Ticksheet Builder provides clearer ticksheet building and measure mapping. Also added is the provision for cloning one type of ticksheet to another, reducing the need for repeated data entry and providing for better homogeneity among ticksheets.

□ **REPORT GALLERY**

Queries are now easy to save and restore with a rich full-page Report Gallery that lists saved reports with descriptions, save dates, creator and permissions. A newly implemented security provision also provides for easy user, group and global permission settings for reads and modifies on all saved query reports. This permits users to seamlessly share reports with others while keeping sensitive data secure. The Gallery can also list non-Epiphany documents or sites on the web, giving the user one location for reports regardless of their source or type -- Epiphany reports, spreadsheets, text documents, external databases, published reports, whatever.

□ **NEW JAVA-BASED QUERY PROCESSOR – FASTER QUERY RESPONSE**

The 3.2 release utilizes a new Java-based query architecture that is faster and more robust than that of the 3.1 release. The Epiphany system still uses plain web browsers without the need for Java, ActiveX or Plug-ins on the clients. On the server, however, Epiphany now uses an advanced multi-threaded query processor written entirely in server-side Java. This new machinery makes a direct ISAPI connection to the IIS web server, resulting in a system of superior performance than that of 3.1's CGI-based architecture.

Section II: Known Issues

1. Installing the Application Server over a pre-existing installation.

When installing and overwriting the same instance of a previous Epiphany Application Server installation, especially if the previous installation's appserver has been or is still running, there might be trouble overwriting some files because of a sharing violation.

Resolution: Although the installation script stops and restarts the WWW service (W3SVC) for you, perhaps something precluded this operation. Stop W3SVC, delete the file in question, rerun the installation, then restart the WWW Service.

If the Application Server was running with the same instance name and parameters, the installation will abort upon encountering a sharing violation. Take care to restart the WWW service by hand in case the install script aborted in the middle and stopped the service without recovering it.

2. Uninstalling Epiphany Software

Currently, uninstalling the Epiphany Application through "Add/Remove Programs" under Windows is unreliable. In the interim, to uninstall the application, remove the instance directory in question or the entire Epiphany directory. It is not necessary to delete the corresponding instance key(s) in the registry; in any case, the path is [HKEY_LOCAL_MACHINE\SOFTWARE\Epiphany], and the sub tree is [HKEY_LOCAL_MACHINE\SOFTWARE\Epiphany\Instances\<instance name>].

3. SQL Server Version

Currently, Epiphany Software functionality is only supported when running with SQL Server Version 6.5 and SVP Pack 3 or later. SQL Server Version 7.0 is not compatible with Clarity or Relevance Version 3.2.

Support for 7.0 is forthcoming; in the meantime, the Epiphany installation procedure does not preempt installation on a system that is running SQL Version 7.0. It is up to the installer to check for this before installing the Epiphany Application Server option.

4. Internet Information Server Version

Release 3.2 is supported with IIS Version 3.0; Release 3.3 will be supported with IIS Version 4.0.

5. EpiMgr.exe: Importing Exported MetaData.

This note is applicable in the case where the metadata was exported in sections to facilitate importing metadata, also in sections. This is a useful alternative to importing a large metadata database all at once.

When importing metadata, particularly to a newly built database, there are likely some dependencies which one set of metadata can have on another set within the metadata's hierarchical structure. Examples of "sets" of metadata are: Constellations, Extractors, etc. Dependencies can lie within these sets, such as "saved queries"; these require a reference to a corresponding ticksheet type as well as security entries which correspond to the read, write and default permissions contained within a saved query.

Also when re-importing one aspect of the metadata into a populated database, links to other metadata may be lost if this order is not adhered to. For example, re-importing measures into existing metadata will sever all the measure mapping links to the ticksheets. Then re-importing the ticksheets will re-link the mappings which will cause a loss of the saved queries.

So, a rule of thumb is to follow the order listed below when importing metadata into to a new meta-database, presuming the exported was in fact exported in sections:

- a. Constellations
- b. Extractors
- c. Measures
- d. Ticksheets
- e. Security
- f. Saved Queries

6. Internet Explorer 3.0x on Windows NT.

If one user installs an IE 3.0x browser, then a different user runs Clarity using this browser, the first element of every listbox will be selected on the ticksheet in place of the default selection. This occurs only on Windows NT; no workaround is available at this time.

7. Epiphany Results Windows: IE3.0x

On a PC running Epiphany queries on IE 3.0x, running the very first query results in a new IE window creation which will pop up in front of the ticksheet window which launched the query.

After the first query, if the results window remains on the desktop and is sitting behind any other windows, subsequent query results will appear in that same window and will not pop forward.

The indication of a query's progress appears in the status bar of the results window and not the ticksheet window. When the results window does not pop forward, the user may get the impression that the query either did not become invoked or ended prematurely, when this is in fact not the case.

On a Macintosh, this same behavior occurs with either Internet Explorer or Netscape browsers, adding that even the first results window created may not pop-up in front of the ticksheet window.

8. Browsers, Epiphany Software, and RAM

HTML tables may consume large amounts of system memory. Therefore, when running reports on computers with 16 → 48 MB of RAM, the system may warn that it is running low on memory. This is especially true with particularly long queries, such as those listing a large number of rows and columns, or those where many measures have been requested. This has been seen on Macintosh systems with 16 MB of RAM, running Internet Explorer 4.0x.

The user may also find that downloading spreadsheets will take a particularly long time, specifically with queries that produce thousands of rows. This has been seen on Windows 95 systems running 32 MB RAM and Netscape 3.0x. This is currently being investigated; the results will be addressed and updated in a coming release.

Therefore, although a system with 16 → 48 MB of RAM can certainly run Clarity and / or Relevance, 64 MB of memory is recommended as a minimum for a client system running Clarity and/or Relevance for smoother operation.

The workaround provided for this and other long query scenarios is the provision for reporting the results directly into spreadsheet format. This option is useful in any configuration when running queries with a large number of rows, which typically takes much longer to display in a browser than in a spreadsheet.

9. Corel Draw, Other Software Packages and IE4

It has been discovered that some applications, when installed on a system after IE4 has already been installed, write over some files that IE4 uses for correct Java Script functionality. CorelDraw is one example of a software product in this category.

IE4 will appear to work fine with web sites and applications that do not use these files. Other web sites and applications which use certain Java operations, Epiphany Clarity and Relevance Query Machinery being among them, will be severely disabled.

We have yet to discover which files are affected. Today, the only workaround is to re-install IE4 once this scenario is encountered. It is yet unknown what effect this will have on the functionality of the offending applications; upon more investigation and customer feedback, the answers will become clearer.

10. Java Script Versions

On some installations of Internet Explorer 3.0x, Java Script Version 1.0 is provided. Epiphany does make the claim that Java Script 1.1 is required, although we have seen that queries can in fact be invoked successfully with Java Script Version 1.0.

If JavaScript Version 1.0 is installed, the Login and Home screens will display a message saying that you do not have 1.1 and therefore cannot proceed. Nevertheless, it is likely that you can in fact proceed with your queries.

If this message is particularly annoying and you are having no trouble with queries, this message can be eliminated in the templates directory of the Epiphany software; the files involved are "login.template" and "toplevel.template".

11. Ticksheet Displays: Netscape 3.0x

In some environments, running Epiphany ticksheets on Netscape Versions 3.0x may display an alternate colored background, somewhat pinkish and textured instead of the standard off-white background. This may happen when resizing the window, when displaying another window above the ticksheet window, etc. This peculiarity has been exhibited with NS3.0x exclusively.

12. Netscape 4.0x



In Netscape 4.0x only, we have seen the browser crash when quickly clicking on different Ticksheet type and Dataset hyperlinks in the left-hand menu list. This can occur when, repetitively, each click to a new ticksheet hyperlink is made before the previous ticksheet has a chance to render.

13. Web Builder - Measures

In the Measure Builder Window of the Web Builder utility, there is a drop down list under Measure Terms in the Fact Column/Dimension Table field. This list includes all the dimensions that were defined in EpiMgr for the current constellation. The dimensions Date and Transtype, which are built by default with every metadata creation, are invalid for this field and incorrectly included in this drop down list.

Choosing either of these base dimensions as a measure element then saving the configuration as such will cause Web Builder to post an exception during the save, even though the save does complete what it can. However, the Application Server will not launch until the Web Builder measure described above is re-modified to exclude the base dimensions.

A second circumstance with Web Builder's measure window is the allowance of multiple instances of them to be opened. If two measure windows are opened, one is closed, and a ticksheet form is opened

thereafter, Web Builder may  with an error. Open only one measure  Builder window within a Web Builder session.

Lastly: Launch Web Builder. Open the Measure Builder Window only. Make changes only to the measure terms of one measure. Close the Measure Builder window, then close Web Builder. Web Builder will exit without prompting for "saving changes before exiting", and the measure term changes will be lost. Changes of any other type will prompt the user to save/not save the changes upon exit.

14. Charts in Relevance

In Release 3.2 when running Relevance Ticksheets of type "Trends" or "Quarter Projections," only line charts are currently displayed regardless of choosing 2D or 3D charts in the display options window.

On Best/Worst type ticksheets, no charts are available. This is by design; the reason that charts are still an option is because of drill-down and save requests that may sequentially follow, for which charts can be a relevant choice.

15. Installation and the MSSQL Server

To run the Application Server or the Remote Administration tool package, the SQL Client utilities must be loaded onto the system. SQL may be installed after the Epiphany installation has been completed, although it must be there at run time.

The installation program does not perform a check for the presence of the SQL Server. The Epiphany installation will complete successfully, and the absence of SQL will be discovered at run time by the lack of proper functionality. Therefore, make sure that the correct version of the SQL Server is in fact properly installed (see Item 3 of this Section).

16. Downloading Spreadsheets

There are three minor issues here, all which will be resolved in the coming release:

- 1) The download spreadsheet option will not display within the results browser window when using Internet Explorer 3.0x as it does in IE4.0x. Instead, the full path and name of the target sybk file appears in the results window. A simple workaround is to highlight and capture the full path and name including the http prefix from the results window and paste it into the browser's address field, thereby displaying the spreadsheet in the window as intended.
- 2) If a precision of one or two decimal places is set in the display options, the spreadsheet display will not follow this setting as the HTML display does. Instead, no decimal places are displayed. The workaround for this is to select the data cells and modify the number format by hand.
- 3) If non-additive measures are chosen for a report, the Epiphany software as designed will not display data for percentage columns in the HTML report even if this display option is chosen. When spreadsheets are displayed however, the percentages do appear when they shouldn't. The workaround is to delete the percentage columns manually.

17. Duplicate Log Entry Errors

A SQL Server bug may cause identity values to be duplicated in Epiphany query logs. In the run-time AppServer logs provided, an error may appear as follows:

```
java.sql.SQLException: [Microsoft][ODBC SQL Server Driver][SQL Server]Violation
of PRIMARY KEY constraint 'PK_query_log_filter__7088BE1D': Attempt to insert
duplicate key in object 'query_log_filter'.
```

This is NOT a serious error and will in no way result in corruption of metadata. In any case, the remedy is as follows: Run the SQL Server tool (ISQL/w) and open the file "metacheck.sql", provided in the Win32 directory of your Epiphany AppServer installation. Run this SQL command list against the metadata database, and the errors should clear up.

18. Windows 95

Before installing Release 3.2's remote administration utility on a Windows 95 system, we recommend keeping a backup of the ".DLL" and ".OCX" files that reside under the \Windows\System directory, namely those of the same name as the DLLs and OCXs that come under the i386\Dll directory of Epiphany's installation kit, listed below. Epiphany does overwrite these DLLs, and although all should be compatible versions, a DLL may be overwritten with a version which another application will not tolerate. We'll be keeping an eye on this to expose any known incompatibilities

The DLLs to be aware of are as follows:

<i>adme.dll</i>	<i>gsgif32.dll</i>	<i>msrd2x35.dll</i>	<i>snjawt11.dll</i>
<i>asycfilt.dll</i>	<i>gsjpg32.dll</i>	<i>msrdo20.dll</i>	<i>snjnet11.dll</i>
<i>comcat.dll</i>	<i>gsprop32.dll</i>	<i>msrepl35.dll</i>	<i>snjreg.exe</i>
<i>comctl32.ocx</i>	<i>gsw32.exe</i>	<i>msvbvm50.dll</i>	<i>snjrt11.dll</i>
<i>comctl32.ocx</i>	<i>gswag32.dll</i>	<i>msvcrt40.dll</i>	<i>stdole2.tlb</i>
<i>comdlg32.ocx</i>	<i>gswdll32.dll</i>	<i>odbcji32.dll</i>	<i>tabctl32.ocx</i>
<i>ctl3d32.dll</i>	<i>msdtcprx.dll</i>	<i>odbcjt32.dll</i>	<i>vbajet32.dll</i>
<i>dao350.dll</i>	<i>msjet35.dll</i>	<i>odbctl32.dll</i>	<i>xolehlp.dll</i>
<i>dtccm.dll</i>	<i>msjint35.dll</i>	<i>oleaut32.dll</i>	
<i>dtctrace.dll</i>	<i>msjter35.dll</i>	<i>olepro32.dll</i>	
<i>dtcutil.dll</i>	<i>msmask32.ocx</i>	<i>rdocurs.dll</i>	

19. Security - Users and Multiple Groups

When a user is a member of multiple groups, the access rights associated with each group will be handled in an additive fashion. The user and administrator must be aware that the security logic handles these additive rights on a column by column basis rather than on a group by group basis, which will be changed in the next release.

The implications of the current method is that when a user is a member of multiple groups which have conflicting, overlapping, or exclusive dimension level access permissions set, it may result in an undesired security breach.

Example:

Group A has permission to see the sales figures for Product 1 in the Western Region.

Group B has permission to see the sales figures for Product 2 in the Eastern Region.

If User X is a member of both groups A and B, he/she will be able to see the figures for Product 1 and Product 2 in *both* regions.

20. Database Entries beginning with spaces

If there are data values that begin with spaces in the source database system, these leading spaces will be truncated when displayed as attributes in the browser query results. The same is also true when these values are entered as filters. Because the spaces do exist in the SQL database, filters on this type of data will fail.

21. Web Builder – Query Fills

If the SQL Server is stopped and started during a Web Builder session is stopped and started, the "Fill from Query" utility used in defining filter groups will result in the message: "No records returned from the query." From then on, even if the SQL server is restarted, a "Fill from Query" operation will not operate and will not return a result. Web Builder must be stopped and restarted to reactivate this utility.

22. Installing while EpiAppServer is running

If an installation is launched with the same instance name as an Application Server that is running, the installation will fail. A dialog box will say that "Error 115 occurred in copying the files" and that EpiServerIni.dll failed to self-register. The installation will then abort. To reinstate the server, make sure

the WWW (W3SVC) service is restarted, and the EpiAppServer is stopped and restarted. To re-install, stop the EpiAppServer, perform the installation, then restart the EpiAppServer.

23. Defining Filter Blocks

Do not use valid HTML code character sequences as labels for filter blocks; they will not display correctly in the results windows.

24. Clientlogo

Any customized logo to be displayed in a ticksheet must be named "clientlogo.gif" and placed in the Web/WWWRoot/images directory.

25. Current DataMart Settings

This item is just a reminder regarding running back room operations, (extractions (extract.exe) and aggregate builds (agg.exe)). The "current" datamart letter (A or B) set in Epimgr's configuration will and should be set to the opposite of what the real active datamart will be when running queries. After running an extraction, a hotswap, provided as a pre-built job step, switches the active letter, so queries will be run against the latest extracted data.

SECTION III: DOCUMENTATION REFERENCES

1. Installation

For Installation instructions, system requirements, listings and installation of required supporting software packages, refer to the Epiphany System Guide for Clarity and Relevance 3.2, Appendix A.

2. Tools

For EpiMgr and Web Builder Tools, refer to the Epiphany System Guide for Clarity and Relevance 3.2, Chapters 3 and 4 respectively.

3. Extraction, Aggregate Builds (Back Room Processing)

Refer to the Epiphany System Guide for Clarity and Relevance 3.2, Chapter 2.

4. Optional Performance Monitor

An optional performance monitor setup is included with your Epiphany software. This provides the ability to track the progress of an extraction job using WinNT's charting tool. Installation and operation of this handy tool comprises the last section of the Epiphany System Guide for Clarity and Relevance 3.2, Appendix A.

5. Application Server

AppServer operation, security, refresh, logs, etc are described in the Epiphany System Guide for Clarity and Relevance 3.2, Chapter 5.

6. Web Browser Queries

Ticksheet usage is very straightforward. Ticksheets bear extensive on-line help links which will facilitate maneuvering through them. A brief summary and picture of the ticksheet layout opens Chapter 4 of the Epiphany System Guide.